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**MCGRAW-EDISON**

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**Onan**



**Parts  
Manual**

**BF  
GenSet**

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**RV Electric Generating Set**

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**965-0220**

# GENERAL INFORMATION

## INSTRUCTIONS FOR ORDERING REPAIR PARTS

For parts or service, contact the dealer from whom you purchased this equipment or refer to your Nearest Authorized Onan Parts and Service Center.

To avoid errors or delay in filling your parts order, please furnish all information requested.

Always refer to the nameplate on your unit.

1. Always give the MODEL, SPEC NO. and SERIAL NO.

The diagram shows a rectangular nameplate with rounded corners and two circular mounting holes at the top. The word "Onan" is prominently displayed in a large, bold, stylized font at the top center. Below the logo, there is a large rectangular box labeled "MODEL AND SPEC NO." in bold capital letters. Underneath this box, the text "SERIAL NO." is followed by another rectangular box for the serial number. The entire nameplate is shown with a slight 3D effect, suggesting it is a physical label.

MODEL AND SPEC NO.

SERIAL NO.

W-1149

For handy reference, insert "YOUR" nameplate information in the spaces above.

2. Do not order by reference number; always use part number and description.
3. Give the part number, description and quantity needed of each item. If an older part cannot be identified, return the part prepaid to your dealer or nearest Onan Parts and Service Center. Print your name and address plainly on the package. Write a letter to the same address stating the reason for returning the part.
4. State definite shipping instructions. Any claim for loss or damage to your unit in transit should be filed promptly against the transportation company making the delivery. Shipments are complete unless the packing list indicates items are back ordered.

Prices are purposely omitted from this Parts Catalog due to the confusion resulting from fluctuating costs, import duties, sales taxes, exchange rates, etc.

For current parts prices, consult your Onan Dealer, Distributor or Parts and Service Center.

"En esta lista de partes los precios se omiten de proposito, ya que bastante confusion resulto de fluctuaciones de los precios, derechos aduanales, impuestos de venta, cambios extrajeros, etc."

Consiga los precios vigentes de su distribuidor de productos "ONAN."

# PARTS CATALOG

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## INTRODUCTION

This catalog applies to the standard Recreational Vehicle Generator Sets as listed below. Parts are arranged in groups of related items. Each illustrated part is identified by a reference number corresponding to the same reference number in the parts list for that group. Parts illustrations are typical. Using the *Model* and *Spec No.* from the nameplate, select parts from this catalog that apply to your set. Unless otherwise mentioned in the description, parts are interchangeable between models. Right and left sides are determined by facing the engine end (front) of the set.

## DATA TABLE

MODEL AND SPEC NO.	TYPE	WATTS	VOLTS	HERTZ	WIRE	PHASE
3.0 BF-53CR/*	Remote	3000	120/240	50	4**	1
4.0 BF-3CR/*	Remote	4000	120/240	60	4**	1

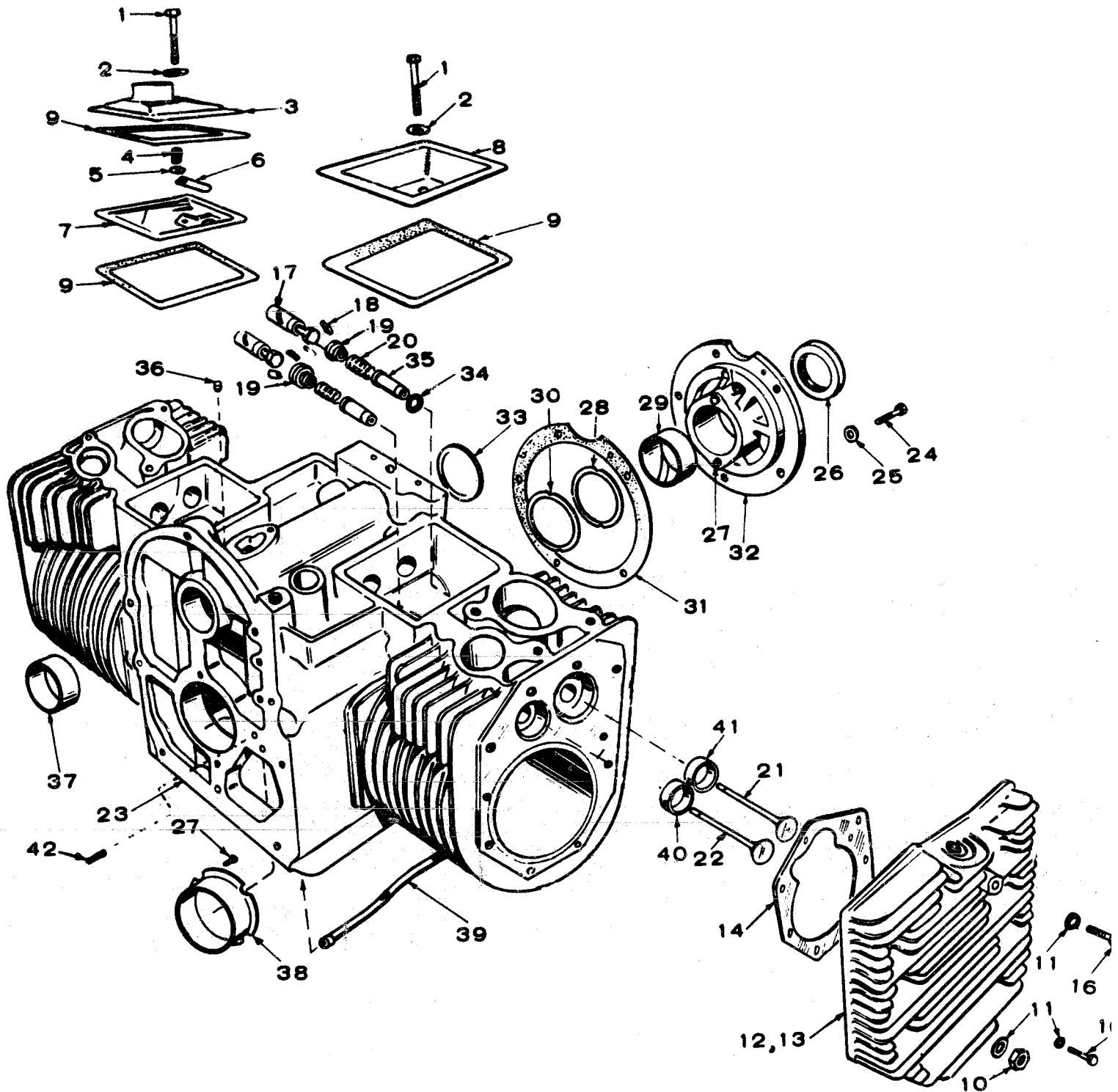
\* - The Specification Letter advances (A to B, B to C, etc.) with manufacturing changes.

\*\* - Set is reconnectable for 120 volt, 2 wire; 240 volt, 2 wire; or 120/240 volt, 3 wire service.

## NOTICE!

ITEMS REFERENCED AS **OPTIONAL** INDICATE PART IS FACTORY INSTALLED AND MAY NOT BE APPLICABLE TO ALL MODELS. FOR FIELD CONVERSIONS ADDITIONAL PARTS ARE USUALLY REQUIRED.

# CYLINDER BLOCK



## CYLINDER BLOCK

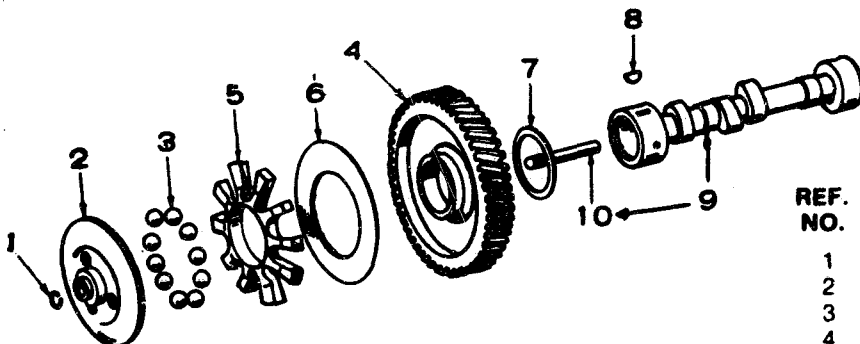
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	800-0010	2	Screw, Cap - Hex Head '1/4-20 x 1-3/4")
2	526-0063	2	Washer, Flat - Copper (1/4")
3	110-2274	1	Cover, Valve - With Breather Port
4	123-1174	1	Spring, Breather Valve
5	526-0018	1	Washer, Flat (17/64" I.D. x 5/8" O.D. x 1/16" Thk)
6	123-1175	1	Reed, Breather Valve
7	123-1173	1	Baffle, Breather Valve
8	110-1879	1	Cover, Valve
9	110-1921	3	Gasket, Valve Cover
10	110-0445	18	Nut, Hex - Hardened (5/16-24) Used on early Spec A Models
11	526-0122	18	Washer, Flat (11/32" ID x 23/32" OD x 0.1345" Thk)
12	110-1924	1	Head, Cylinder - Right Side
13	110-1925	1	Head, Cylinder - Left Side
14	110-1920	2	Gasket, Head
16	SCREW, CAP - HEX HEAD		
	800-0540	12	5/16-18 x 1-5/8" - Grade 8
	800-0541	6	5/16-18 x 2" - Grade 8
17	TAPPET, VALVE		
	115-0006	4	Standard
	115-0006-01	4	.001" Oversize
	115-0006-02	4	.002" Oversize
	115-0006-05	4	.005" Oversize
18	110-0639	8	Lock, Valve Spring
19	110-0904	4	Rotocap, Valve
20	110-0539	4	Spring, Valve
21	110-1808	2	Valve, Intake
22	110-1809	2	Valve, Exhaust
23	110-2354	1	Block Assembly, Cylinder (Includes Parts Marked †)
24	800-0051	5	†Screw, Cap - Hex Head (3/8-16 x 1-1/4")
25	850-0050	5	†Washer, Lock - Spring (3/8)
26	509-0041	1	†Seal, Oil - Crankshaft, Rear
27	516-0072	4	†Pin, Drive - Bearing Stop
28	104-0776	As Req.	†Shim (.005") Crankshaft

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
29	BEARING, SLEEVE - CRANKSHAFT, REAR (Includes Thrust Washer)		
	101-0450	1	†Standard
	101-0450-02	1	.002" Undersize
	101-0450-10	1	.010" Undersize
	101-0450-20	1	.020" Undersize
	101-0450-30	1	.030" Undersize
30	104-0575	2	†Washer, Thrust
31	101-0415	1	†Gasket, Bearing Plate
32	101-0439	1	†Plate, Bearing - Rear
33	517-0073	1	†Plug, Expansion - Welch
34	110-0068	2	†Gasket - Intake Valve Guide
35	110-1935	4	†Guide, Valve
36	517-0120	1	†Plug, Vacuum Tube Port
37	101-0405	2	†Bearing, Sleeve - Camshaft
38	BEARING, SLEEVE - CRANKSHAFT, FRONT		
	101-0432	1	†Standard
	101-0432-02	1	.002" Undersize
	101-0432-10	1	.010" Undersize
	101-0432-20	1	.020" Undersize
	101-0432-30	1	.030" Undersize
39	120-0706	1	†Tube, Oil - Crankcase
40	INSERT, VALVE SEAT - EXHAUST		
	110-0245	2	†Standard
	110-0245-02	2	.002" Oversize
	110-0245-05	2	.005" Oversize
	110-0245-10	1	.010" Oversize
	110-0245-25	2	.025" Oversize
41	INSERT, VALVE SEAT - INTAKE		
	110-0197	2	†Standard
	110-0197-02	2	.002" Oversize
	110-0197-05	2	.005" Oversize
	110-0197-10	2	.010" Oversize
	110-0197-25	2	.025" Oversize
42	516-0141	2	†Pin, Hear Cover Alignment

† - Included in Cylinder Block Assembly.

\* - Flanged bearing replaces thrust washer and the unflanged front crankshaft bearing.

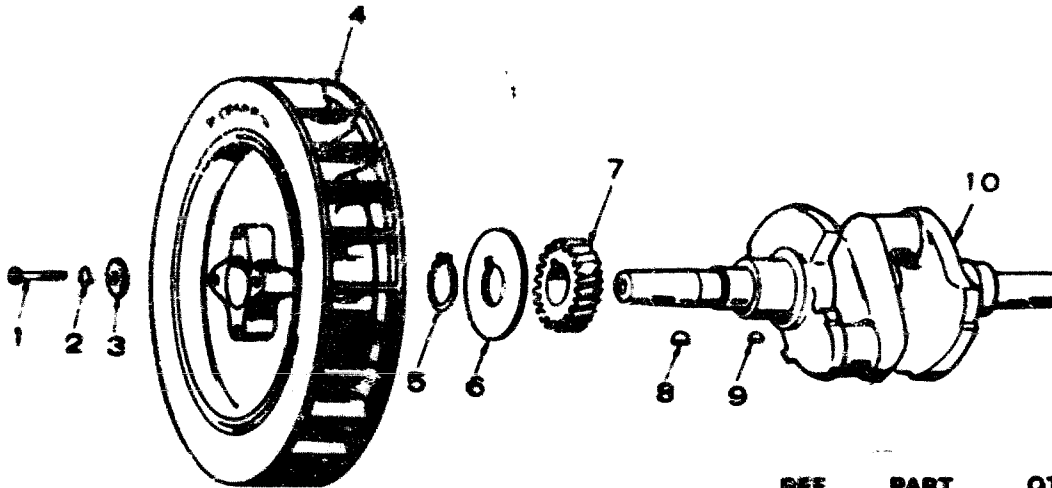
## CAMSHAFT



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	150-0078	1	Ring, Retaining
2	150-1116	1	Cup, Governor
3	510-0015	10	Ball, Governor
4	105-0332	1	Gear Camshaft (Includes Parts Marked †)
5	150-1257	1	†Spacer, Flyball
6	150-0077	1	†Plate, Flyball
7	105-0004	1	Washer, Thrust
8	515-0001	1	Key, Cam Gear
9	105-0376	1	Camshaft (Includes Center Pin)
10	150-0075	1	Pin, Center - Camshaft

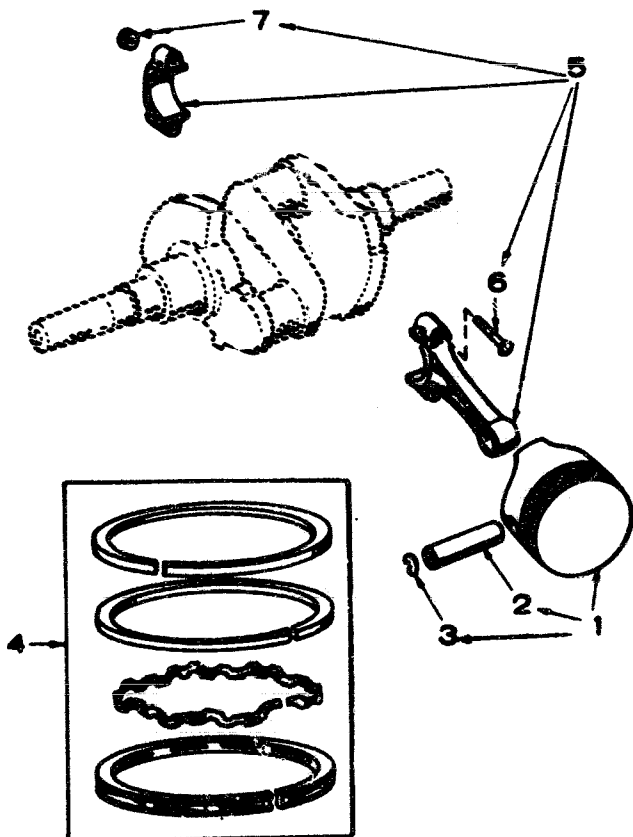
† - Parts included in Camshaft Gear.

## CRANKSHAFT AND FLYWHEEL



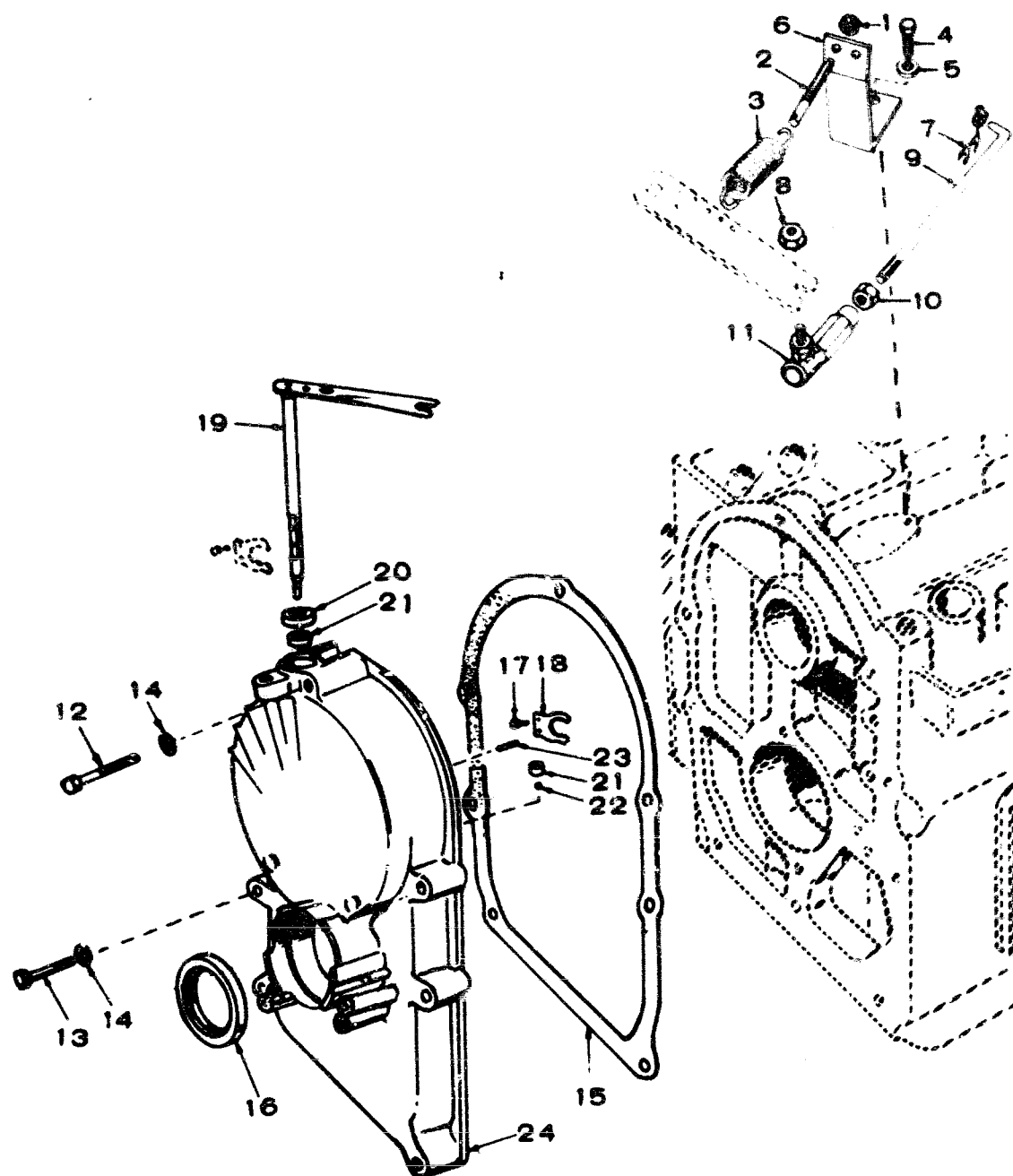
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	104-0170	1	Screw, Cap - Hex Head Heat Treated (7/16-14 x 4")
2	850-0055	1	Washer, Lock - Spring (7/16)
3	526-0017	1	Washer, Flat (15/32" I.D. x 1-1/4" O.D. x 1/4" Thk)
4	134-3204	1	Flywheel
5	518-0014	1	Ring, Retaining
6	104-0043	1	Washer, Gear
7	104-0032	1	Gear, Crankshaft
8	515-0227	1	Kit, Flywheel
9	515-0001	1	Key, Crankshaft Gear
10	104-0895	1	Crankshaft

## PISTON AND ROD



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	PISTON (Includes Pin & Retaining Rings)		
	112-0134	2	Standard
	112-0134-05	2	.005" Oversize
	112-0134-10	2	.010" Oversize
	112-0134-20	2	.020" Oversize
	112-0134-30	2	.030" Oversize
	112-0134-40	2	.040" Oversize
2	112-0122	2	Pin, Piston
3	518-0311	4	Ring, Retaining
4	RING SET, PISTON		
	113-0174	2	Standard
	113-0174-05	2	.005" Oversize
	113-0174-10	2	.010" Oversize
	113-0174-20	2	.020" Oversize
	113-0174-30	2	.030" Oversize
	113-0174-40	2	.040" Oversize
5	ROD, CONNECTING (Includes Bolt and Nut)		
	114-0225	2	Standard
	114-0225-10	2	.010" Undersize
	114-0225-20	2	.020" Undersize
	114-0225-30	2	.030" Undersize
6	114-0228	4	Bolt, Special - Connecting Rod
7	870-0137	4	Nut, Self-locking - Hex (5/16-24)

## GEARCASE AND GOVERNOR



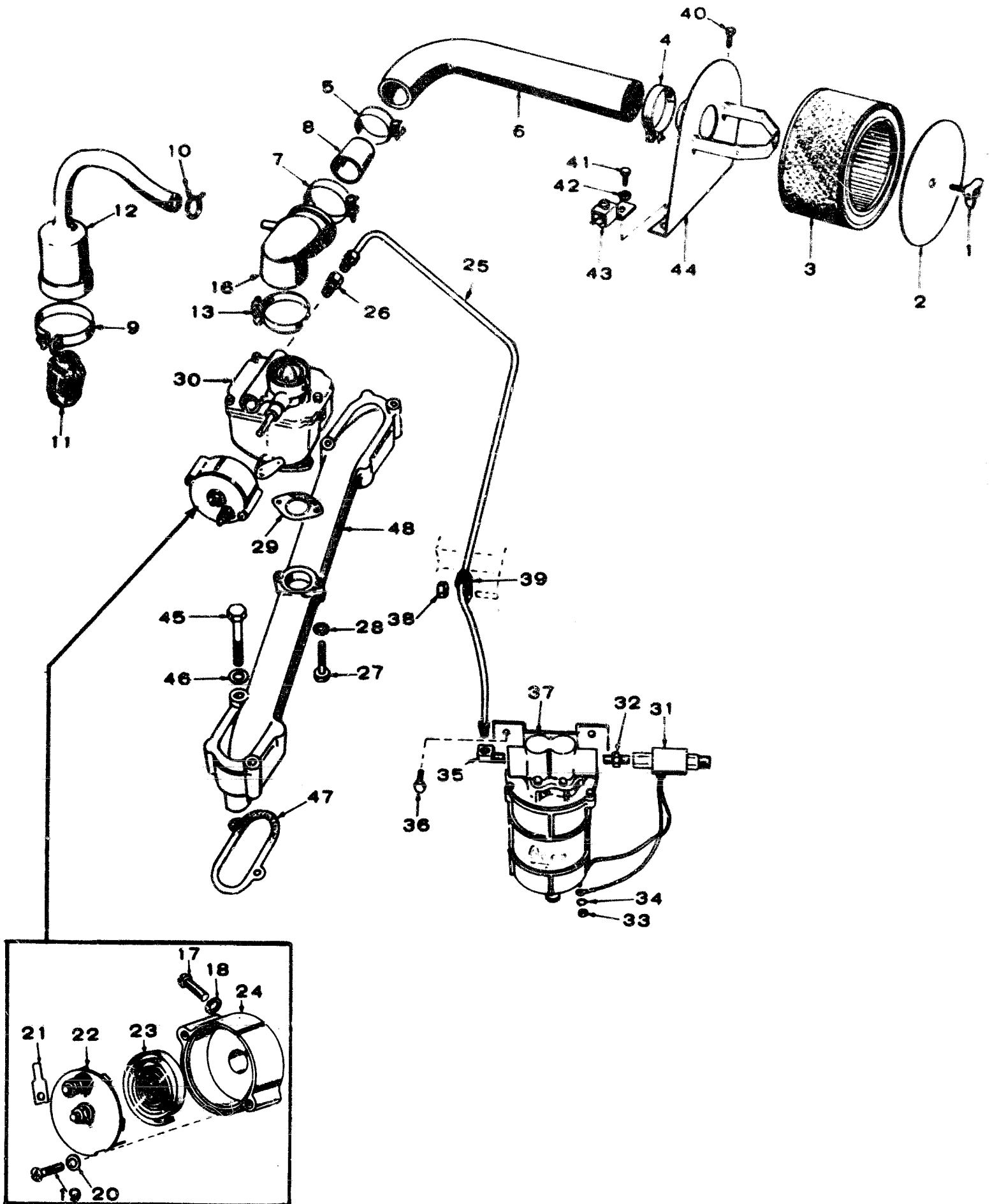
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	870-0131	1	Nut, Self-Locking (1/4-20)
2	150-0796	1	Stud, Speed Adjustment
3	150-0098	1	Spring, Governor
4	800-0004	2	Screw, Cap - Hex Head (1/4-20 x 5/8")
5	526-0063	2	Washer, Flat - Copper (1/4)
6	150-0159	1	Bracket, Governor
7	518-0006	1	Clip, Retaining - Rod End
8	870-0131	1	Nut, Self-Locking (1/4-20)
9	150-0629	1	Rod - Governor Arm to Carburetor
10	870-0053	1	Nut, Hex (#10-32)
11	150-0639	1	Ball Joint
12	800-0034	1	Screw, Cap - Hex Head (5/16-18 x 2-1/4")

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
13	800-0032	4	Screw, Cap - Hex Head (5/10-18 x 1-3/4")
14	526-0065	5	Washer, Flat - Copper (5/16)
15	103-0408	1	Gasket, Gearcase
16	509-0040	1	Seal, Oil
17	815-0046	2	Screw, Machine - Pan Head (#8-32 x 3/8")
18	150-1187	1	Yoke, Governor
19	150-1542	1	Arm and Shaft Assembly - Governor
20	502-0008	1	Seal, Oil
21	510-0013	2	Bearing, Needle
22	510-0014	1	Ball, Bearing
23	516-0130	1	Pin, Straight, Headless
24	103-0519	1	Cover Assembly, Gear (Includes Parts Marked *)

\* - Parts included in 103-0519 Gear Cover Assembly.



# FUEL SYSTEM



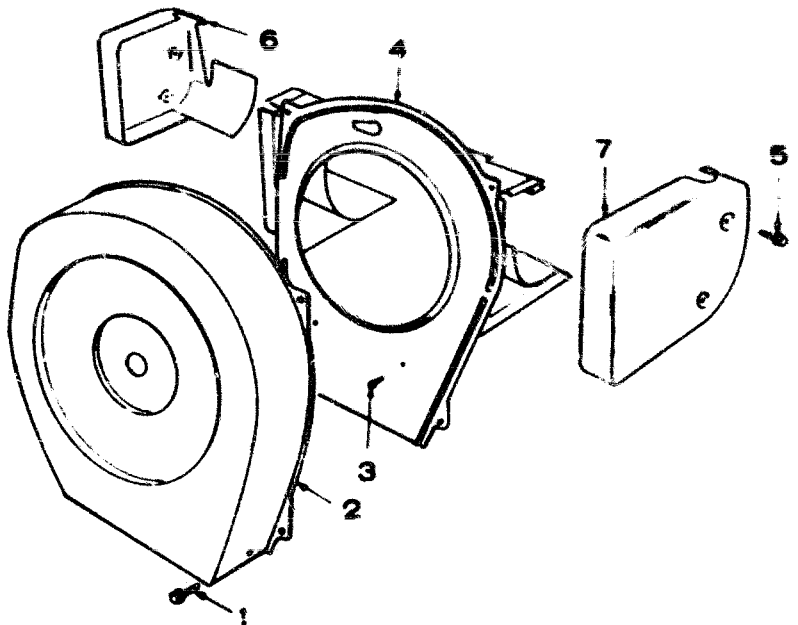
## FUEL SYSTEM

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	518-0056	1	Screw, Wing (#10-32 x 1/2")	27	800-0023	2	Screw, Cap - Hex Head (1/4-20 x 1-3/8")
2	140-1153	1	Cover, Air Cleaner	28	850-0040	2	Washer, Lock - Spring (1/4)
3	140-0495	1	Cartridge, Air Cleaner	29	141-0078	1	Gasket - Carburetor to Manifold
4	503-0004	1	Clamp, Hose	30	142-0575	1	ECarburetor, Gasoline
5	503-0311	1	Clamp, Hose	31	307-1457	1	Valve, Solenoid - Full Cutoff
6	503-0643	1	Hose (Preformed) - Air Cleaner	32	502-0082	1	Nipple, Pipe - Hex
7	503-0280	1	Clamp, Hose	33	860-0008	1	Nut, Hex (#8-32)
8	140-0211	1	Sleeve, Air Cleaner Hose	34	850-0025	1	Washer, Lock - Spring (#8)
9	503-0107	1	Clamp, Hose	35	502-0002	1	Elbow, Pipe
10	518-0358	1	Clamp, Hose	36	821-0009	2	Screw, Self-Locking - Hex Washer Head (1/4-20 x 3/8")
11	123-0865	1	Filter, Breather Hose	37	149-1553	1	EPump, Fuel (Facet)
12	123-1288	1	Tube, Breather (Preformed)	38	862-0015	1	Nut, Hex (5/16-18)
13	503-0107	1	Clamp, Tube	39	518-0350	1	Clamp, Loop - Insulated
16	145-0489	1	Adapter, Inlet - Carburetor Air	40	821-0009	1	Screw, Self-Locking - Hex Washer Head (1/4-20 x 3/8")
17	815-0110	1	Screw, Machine - Filister Head (#10-32 x 7/8)	41	821-0010	1	Screw, Self-Locking - Hex Washer Head (1/4-20 x 1/2")
18	850-0030	1	Washer, Lock - Spring (#10)	42	856-0006	1	Washer, Lock - External/Internal Tooth (1/4)
19	815-0285	2	Screw, Machine - Round Head with External Tooth Lockwasher (#8-32 x 5/16")	43	332-0142	1	Terminal, Lug - Ground
20	526-0062	2	Washer, Flat - Brass (0.2" I.D. x 1/2" O.D. x 1/16" Thk)	44	140-1173	1	Bracket, Air Cleaner
21	332-0527	1	Terminal, Lug	45	800-0034	4	Screw, Cap - Hex Head (5/16-18 x 2-1/4")
22	153-0114	1	Cover, Choke	46	850-0045	4	Washer, Lock - Spring (5-16)
23	153-0017	1	Element, Thermo - Choke	47	154-1446	2	Gasket - Intake Manifold
24	153-0058	1	Housing, Choke	48	154-1468	1	Manifold, Intake
25	149-1417	1	Line, Fuel				
26	502-0003	1	Reducer, Pipe				

£ - See Separate Group for Components of original Fuel Pump (Walbro).

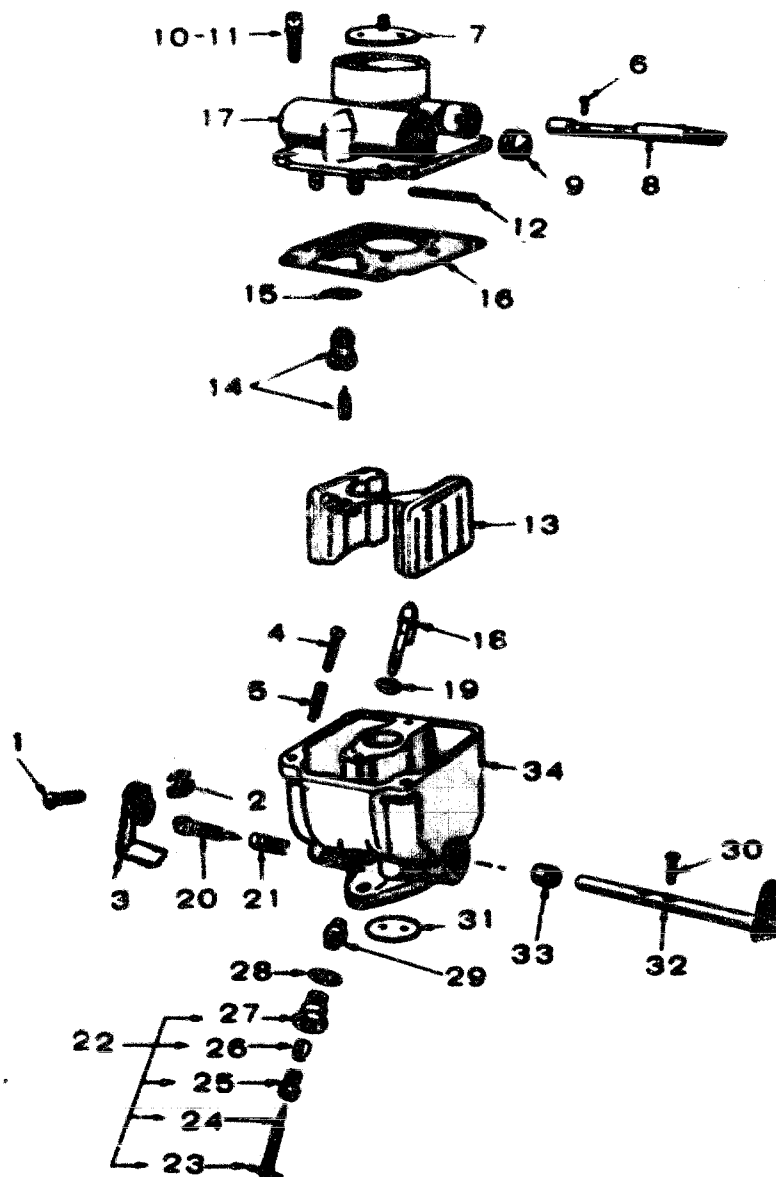
## HOUSING

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	821-0008	4	Screw, Self-Locking - Hex Head (1/4-20 x 5/16")
2	134-3149	1	Scroll Assembly (Includes Guard)
3	815-0261	2	Screw, Tapping - Hex Washer Head (1/4-20 x 7/16")
4	134-3174	1	Backplate, Scroll
5	815-0261	4	Screw, Tapping - Hex Washer Head (1/4-20 x 7/16")
6	134-3127	1	Housing, Cylinder Air - LH
7	134-3132	1	Housing, Cylinder Air - RH



## CARBURETOR PARTS

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	142-0575	1	Carburetor - Gasoline
	142-0033	1	Kit, Gasket (Includes Parts Marked †)
	142-0371	1	Kit, Repair (Includes Parts Marked £)
1	813-0102	1	Screw, Machine - Round Head (#10-32 x 5/8")
2	861-0008	1	Nut, Square (#10-32)
3	145-0445	1	Lever, Stop - Throttle
4	812-0065	1	Screw, Machine - Round Head (#6-32 x 5/8")
5	142-0035	1	Spring - Throttle Stop Adjusting Screw
6	815-0091	2	£Screw, Machine - Flatster Head with Internal Tooth Lockwasher (#4-40 x 3/16")
7	142-0037	1	Fly, Choke
8	142-0183	1	Shaft, Choke
9	505-0053	1	Plug, Pipe - Brass
10	815-0103	1	Screw, Machine - Round Head (#10-24 x 1/2")
11	815-0109	2	Screw, Machine - Round Head (#10-24 x 5/8")
12	142-0039	1	£Shaft, Float
13	142-0038	1	Float & Lever Assembly
14	142-0049	1	£Valve & Seat Assembly
15	148-0017	1	†£Gasket - Float Valve
16	142-0031	1	†£Gasket - Cover to Body
17	142-0205	1	Cover, Carburetor
18	142-0285	1	Nozzle, Main
19	142-0032	1	†£Gasket, Main Nozzle
20	142-0040	1	£Needle, Idle Adjusting
21	142-0282	1	Spring - Idle Adjusting Needle
22	142-0042	1	Needle Assembly (Includes Parts Marked *)
23	516-0027	1	*Pin, Main Adjusting Needle
24	142-0041	1	*£Needle, Main Adjusting
25	142-0045	1	*Retainer, Main Adjusting Needle
26	142-0206	1	*†£Packing Main Adjusting Needle
27	142-0046	1	*Retainer, Main Adjusting Needle
28	148-0017	1	†£Gasket - Needle Assembly
29	142-0370	1	Jet - Main Adjusting Needle
30	815-0072	2	£Screw, Machine - Oval Head (#4-40 x 1/4")
31	142-0369	1	Fly, Throttle
32	142-0368	1	£Shaft, Throttle
33	142-0343	1	Bushing, Sleeve - Throttle Shaft
34		1	Body, Carburetor (Not Sold Separately)

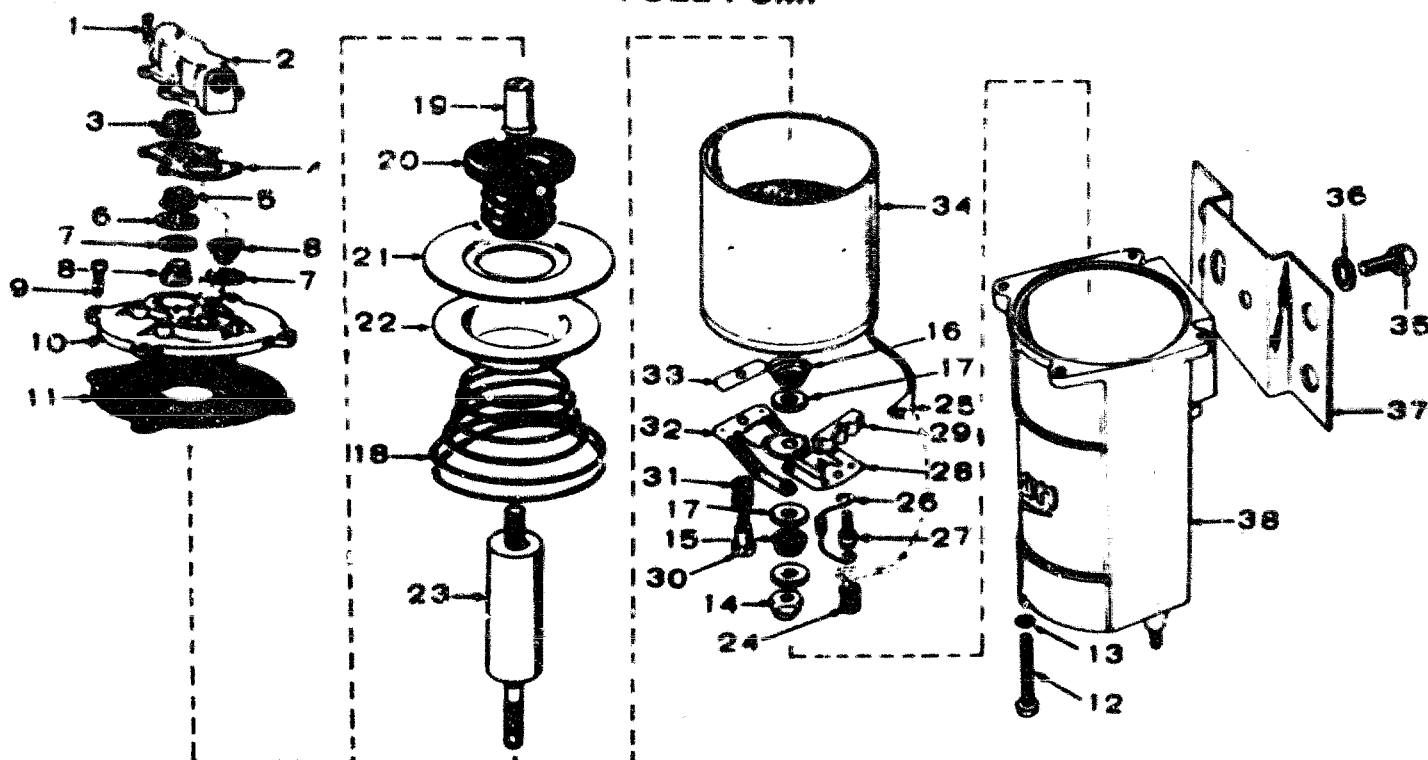


\* - Included in Main Adjusting Needle Assembly  
#142-0042.

† - Included in Gasket Kit #142-0033.

£ - Included in Carburetor Repair Kit #142-0371.

## FUEL PUMP



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
NOTE: These Fuel Pump parts are for the original equipment pump (Walbro). For replacement pump a 149-1553 (Facet) pump is supplied.			
	149-1553	1	Pump, Fuel - Replacement (Facet)
1	#	4	Screw, Fillister Locking Head, Cross-Recessed, Steel (8-32 x 3/8")
2	£	1	Valve Cap, Pump
3	149-1397	1	Screen, Filter (7/8" Dia.)
4	149-1398	1	Gasket, Cap to Housing, Valve
5	149-1398	1	Screen, Filter (5/8" Dia.)
6	£	1	Seat, Valve, Pump
7	149-1400	2	Disc, Valve, Pump
8	£	2	Spring, Valve, Pump
9	#	4	Screw, Fillister Locking Head, Cross-Recessed, Steel (8-32 x 3/8")
10	£	1	Housing, Valve, Pump
11	149-1401†	1	Gasket, Valve Housing to Pump Body
12	#	2	Screw, Binder Head, Cross-Recessed, Steel (8-32 x 15/16")
13	#	2	Washer, Flat, Fiber (No. 8)
14	£	1	Nut, Hex, Acorn, Sheet Metal (No. 8)
15	£	1	Spring, Helical, Compression (Barrel Shaped)
16	£	1	Spring, Helical, Compression (Flat Coil)
17	£	3	Washer, Insulating, Nylon (No. 8)
18	†	1	Spring, Helical, Compression (Bellows Pressure)
19	†	1	Nut, Retaining, Bellows
20	†	1	Bellows, Fuel Pump

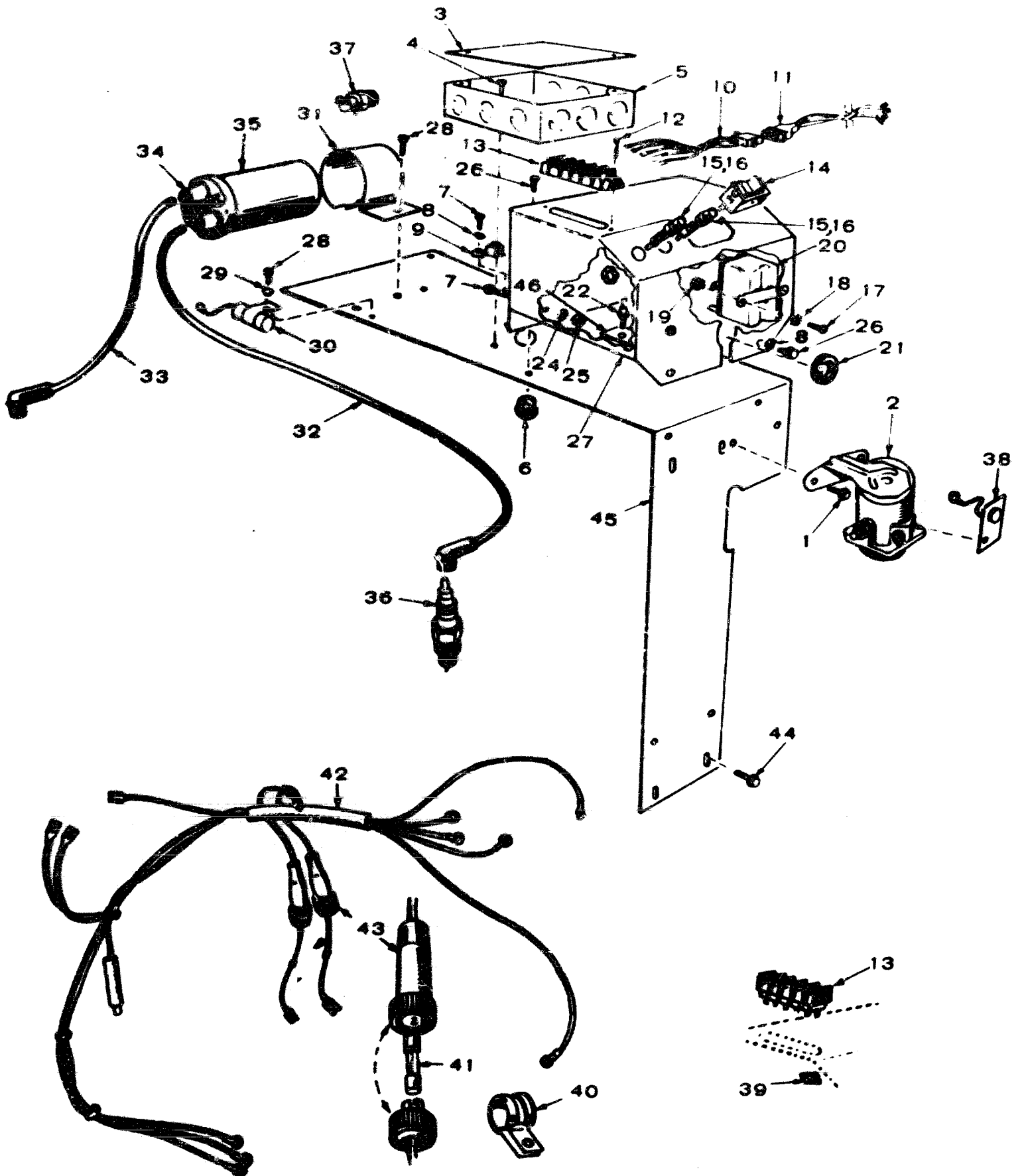
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
21	£	1	Plate, Retaining, Bellows
22	£	1	Plate, Retaining, Spring
23	£	1	Armature, Fuel Pump
24	£	1	Spring, Helical, Compression (Electrical Connection)
25	£	1	Lug, Terminal (Coil Lead)
26	£	1	Diode
27	£	1	Screw, Special, Nylon
28	£	1	Plate, Terminal, Point
29	£	1	Insulator, Spacer
30	£	1	Screw, Binder Head, Slotted, Shoulder, Brass (8-32 x 15/16")
31	£	1	Spring, Helical, Compression (Point Damper)
32	£	1	Plate Assembly, Breaker Point
33	£	1	Insulator, Breaker Plate
34	£	1	Coil Assembly, Fuel Pump
35	#	2	Screw, Hex Head, Steel (1/4-20 x 1/2")
36	#	2	Washer, Lock, Steel (1/4)
37	£	1	Bracket, Fuel Pump Mounting
38	£	1	Case, Fuel Pump Body
	149-1396	1	Repair Kit, Bellows (Includes Parts Marked †)

£ - Original Equipment Parts, Not Sold Separately; Order Complete Pump for Replacement.

† - Parts Included in Bellows Repair Kit.

# - Standard Hardware Parts, Procure Locally.

# CONTROL—IGNITION



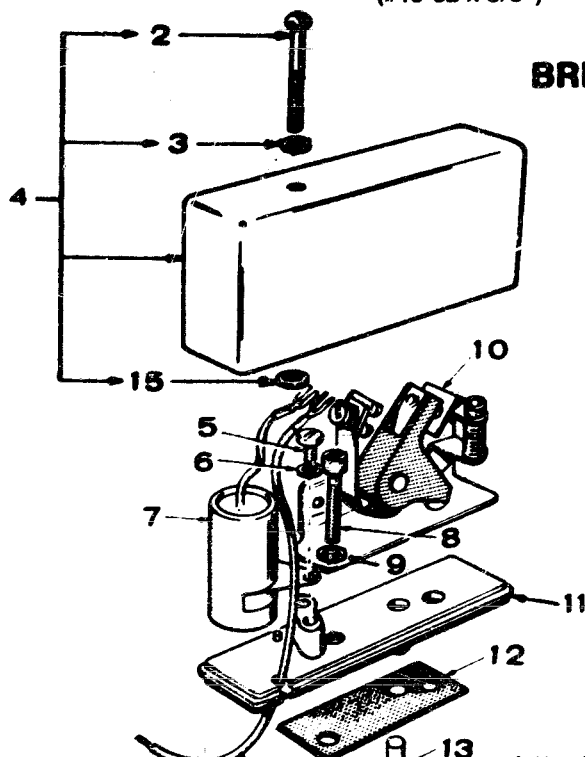
## CONTROL—IGNITION

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	821-0009	2	Screw, Self-locking - Hex Head (1/4-20 x 3/8")
2	RELAY, SOLENOID		
	307-0845	1	Spec A Only
	307-1498	1	Begin Spec B
3	330-0006	1	Cover, Outlet Box
4	815-0350	2	Screw, Tapping - Hex Head (#10-32 x 3/8")
5	330-0028	1	Box, Outlet
6	508-0191	1	Grommet, Nylon
7	821-0010	3	Screw, Self-locking - Hex Head (1/4-20 x 1/2")
8	856-0006	3	Washer, Lock - External/Internal Tooth (1/4")
9	332-0142	1	Terminal, Lug - Solderless
10	338-0958	1	Harness, Wiring - Remote Control (Optional)
11	HARNES. WIRING - REMOTE CONTROL (Optional)		
	338-0959	1	10 ft. lg
	338-0960	1	30 ft. lg
12	815-0388	2	Screw, Tapping - Pan Head (#6-32 x 1/2") - Begin Spec B
13	TERMINAL, STRIP		
	332-1650	1	Spec A Only
	332-1918	1	Begin Spec B
14	308-0383	1	Switch, Push - SPDT
15	321-0174	2	Fuse, Cartridge (5 Amp, 32 Volt) - Begin Spec B
16	321-0217	2	Fuseholder - Begin Spec B
17	822-0032	3	Screw, Machine - Pan Head (#6-32 x 1/2") - Begin Spec B
18	853-0003	2	Washer, Lock - External Tooth (#6) - Begin Spec B
19	870-0183	2	Nut, Hex with External Tooth Lockwasher (#6-32) - Begin Spec B
20	307-1497	1	Relay, Armature - SPST (8 Amp, 12 Volt) - Begin Spec B
21	508-0008	1	Grommet, Rubber - Begin Spec B
22	305-0235	1	Diode, Rectifier (500 PIV, 22 Amp) - Begin Spec B
24	853-0013	1	Washer, Lock - External Tooth (1/4")
25	862-0001	1	Nut, Hex (1/4-20)
26	815-0350	4	Screw, Tapping - Hex Head (#10-32 x 3/8")

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
27	CONTROL, BOX		
	301-3877	1	Spec A Only
	301-4038	1	Begin Spec B
28	815-0350	2	Screw, Tapping - Hex Head (#10-32 x 3/8")
29	856-0003	1	Washer, Lock - External/Internal Tooth (#10)
30	312-0027	1	Capacitor, Ignition (0.5 Mfd)
31	166-0588	1	Clamp, Coil
32	LEAD, ELECTRICAL - SPARK PLUG (RH)		
	167-1557	1	14-1/2" lg, Spec A Only
	167-1574	1	17-1/2" lg, Begin Spec B
33	LEAD, ELECTRICAL - SPARK PLUG (LH)		
	167-1520	1	7-1/2" lg, Spec A Only
	167-1521	1	7-1/4" lg, Begin Spec B
34	CAP/NIPPLE, IGNITION COIL TERMINALS		
	160-0604	2	† Cap - Spec A Only
	160-0558	2	* Nipple - Begin Spec B
35	COIL, IGNITION		
	166-0535	1	Spec A Only
	166-0643	1	Begin Spec B
36	167-0237	2	Spark Plug
37	508-0179	1	Clamp, Cable - Strain Relief - Optional
38	358-0072	1	Diode & Heatsink - Spec A Only
39	332-1646	2	Clip, Retaining - Terminal Strip - Spec A Only
40	332-1876	1	Clamp, Cable
41	321-0194	2	Fuse, Cartridge (9 Amp, 32 Volt) - Spec A Only
42	HARNES. WIRING - SET		
	338-0955	1	Spec A Only, Includes Fuseholders
	338-0938	1	Begin Spec B
43	321-0193	2	Fuseholder (Part of Harness) - Spec A Only
44	821-0010	6	Screw, Self-locking - Hex Head (1/4-20 x 3/8")
45	BRACKET, MOUNTING - CONTROL		
	301-3878	1	Spec A Only
	301-4039	1	Begin Spec B
46	370-1002	1	Bracket, Angle - Diode Mounting

\* - Part of Spark Plug Electrical Lead.

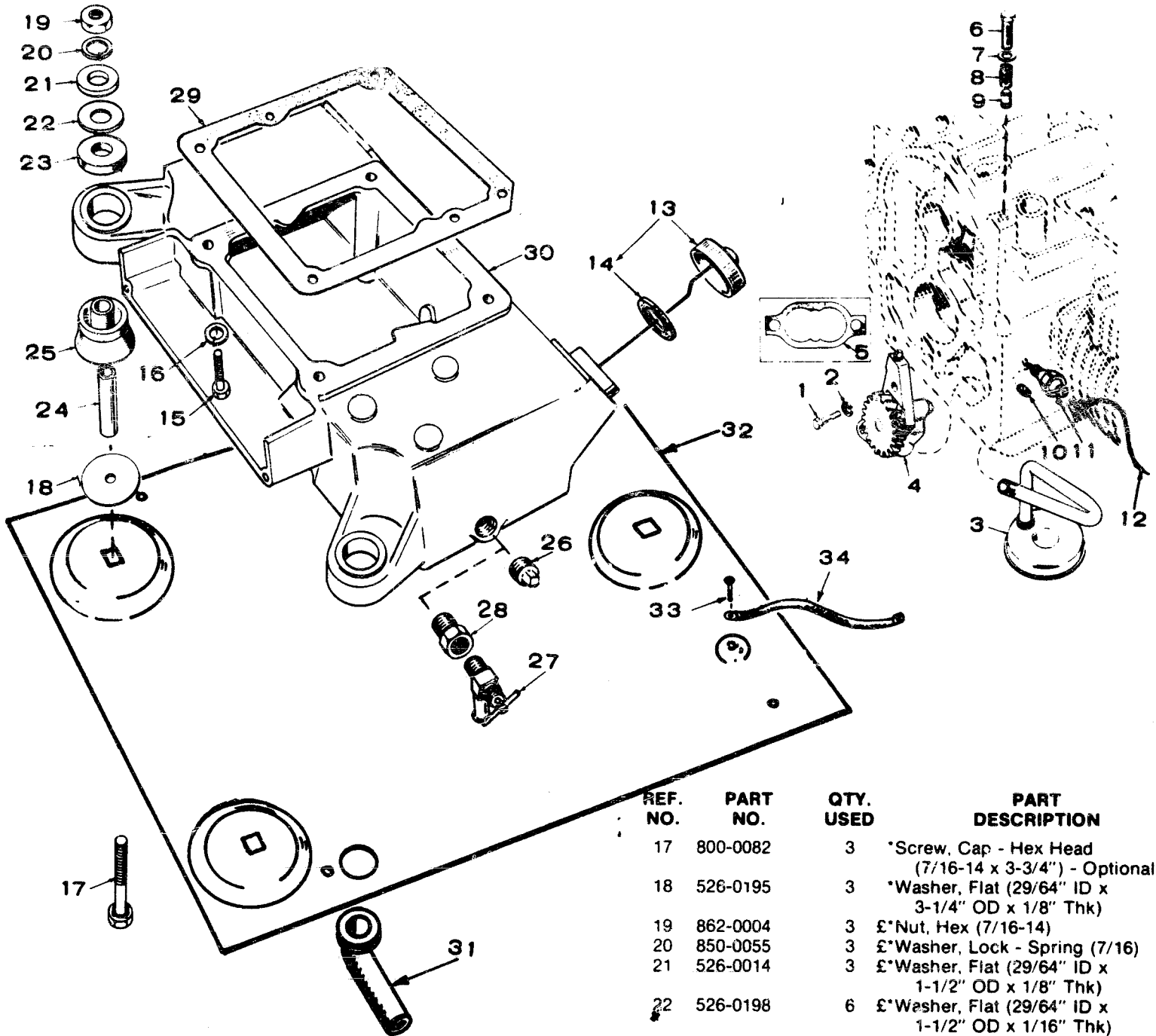
† - Part of Ignition Coil #160-0535.



## BREAKER BOX ASSEMBLY

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	160-1210	1	Box Assembly, Breaker (Includes Parts Marked *)
2	812-0108	1	*Screw, Machine - Round Head (#10-24 x 1-1/2")
3	526-0008	1	*Washer, Flat (13/64" I.D. x 7/16" O.D. x 1/32" Thk)
4	160-1232	1	*Cover, Breaker Box (Includes Screw, Washer and Retainer)
5	815-0358	1	*Screw, Tapping - Hex Head (#8-32 x 5/16")
6	850-0025	1	*Washer, Lock - Spring (#8)
7	312-0196	1	*Capacitor, Ignition - 30 MFD
8	802-0034	2	*Screw, Cap - Socket Head (1/4-20 x 3/4")
9	850-0038	2	*Washer, Lock - Spring (1/4)
10	160-1183	1	*Point Assembly, Breaker
11	160-1219	1	*Base, Breaker Box
12	160-1150	1	*Gasket, Breaker Box
13	160-1151	1	Plunger, Breaker Point Assy.
14	336-2378	1	Lead, Electrical - Coil to Breaker Points
15	509-0065	1	Retainer, Cover Mounting

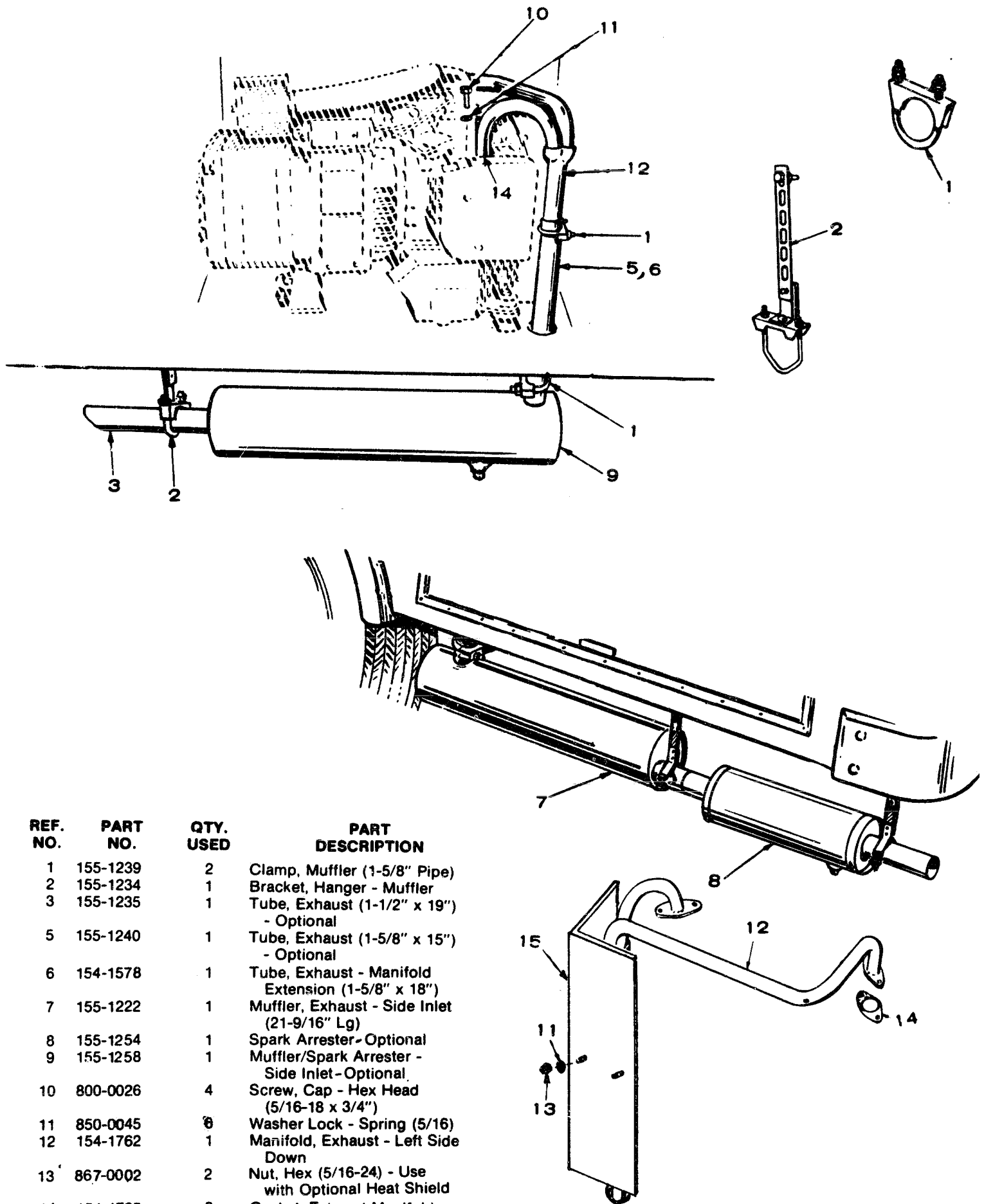
# OIL SYSTEM AND MOUNTING PLATE



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	800-0007	2	Screw, Cap - Hex Head (1/4-20 x 1")
2	850-0040	2	Washer, Lock - Spring (1/4)
3	120-0648	1	Cup, Oil Pump Intake
4	120-0491	1	Pump, Oil
5	120-0161	1	Gasket Kit - Oil Pump
6	801-0050	1	Screw, Cap - Hex Head (3/8 x 24 x 1")
7	526-0066	1	Washer, Flat - Copper (3/8)
8	120-0140	1	Spring - Oil Bypass Valve
9	120-0398	1	Valve - Oil Bypass
10	502-0080	1	Plug, Pipe - 3/8 - Optional
11	309-0237	1	Switch, Low Oil Pressure
12	309-2379	1	Lead, Electrical - Low Oil Pressure Switch
13	123-0489	1	Cap & Indicator, Oil Fill
14	123-0191	1	Gasket, Oil Fill Cap
15	800-0051	4	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
16	850-0050	4	Washer, Lock - Spring (1/4)

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
17	800-0082	3	*Screw, Cap - Hex Head (7/16-14 x 3-3/4") - Optional
18	526-0195	3	*Washer, Flat (29/64" ID x 3-1/4" OD x 1/8" Thk)
19	862-0004	3	£*Nut, Hex (7/16-14)
20	850-0055	3	£*Washer, Lock - Spring (7/16)
21	526-0014	3	£*Washer, Flat (29/64" ID x 1-1/2" OD x 1/8" Thk)
22	526-0198	6	£*Washer, Flat (29/64" ID x 1-1/2" OD x 1/16" Thk)
23	402-0282	3	£*Snubber
24	402-0290	3	£*Spacer, Sleeve
25	£CUSHION, VIBRATION		
	402-0283	2	Engine End
	402-0284	1	Generator End
26	505-0056	1	Plug, Pipe (1/2") (Used on Some Models)
27	504-0092	1	Valve, Oil Drain
28	505-0019	1	Reducer, Pipe (1/2" to 3/8")
29	102-0693	1	Gasket, Oil Base
30	102-0801	1	Base, Oil
31	122-0345	1	Hose, Oil Drain - Optional
32	403-1219	1	Plate, Mounting
33	815-0194	1	Screw, Tapping - Hex Head with External Tooth Lockwasher (10-32 x 3/8")
34	337-0095	1	Strap, Electrical - Grounding
35	816-0206	3	£Bolt, Carriage (7/16-14 x 3-1/2")
£HARDWARE PACKAGE, MOUNTING			
	402-0435	1	Used with Mounting Plate (Includes Parts Marked £)
	402-0434	1	Sets Without Mounting Plate - Optional (Includes Parts Marked *)

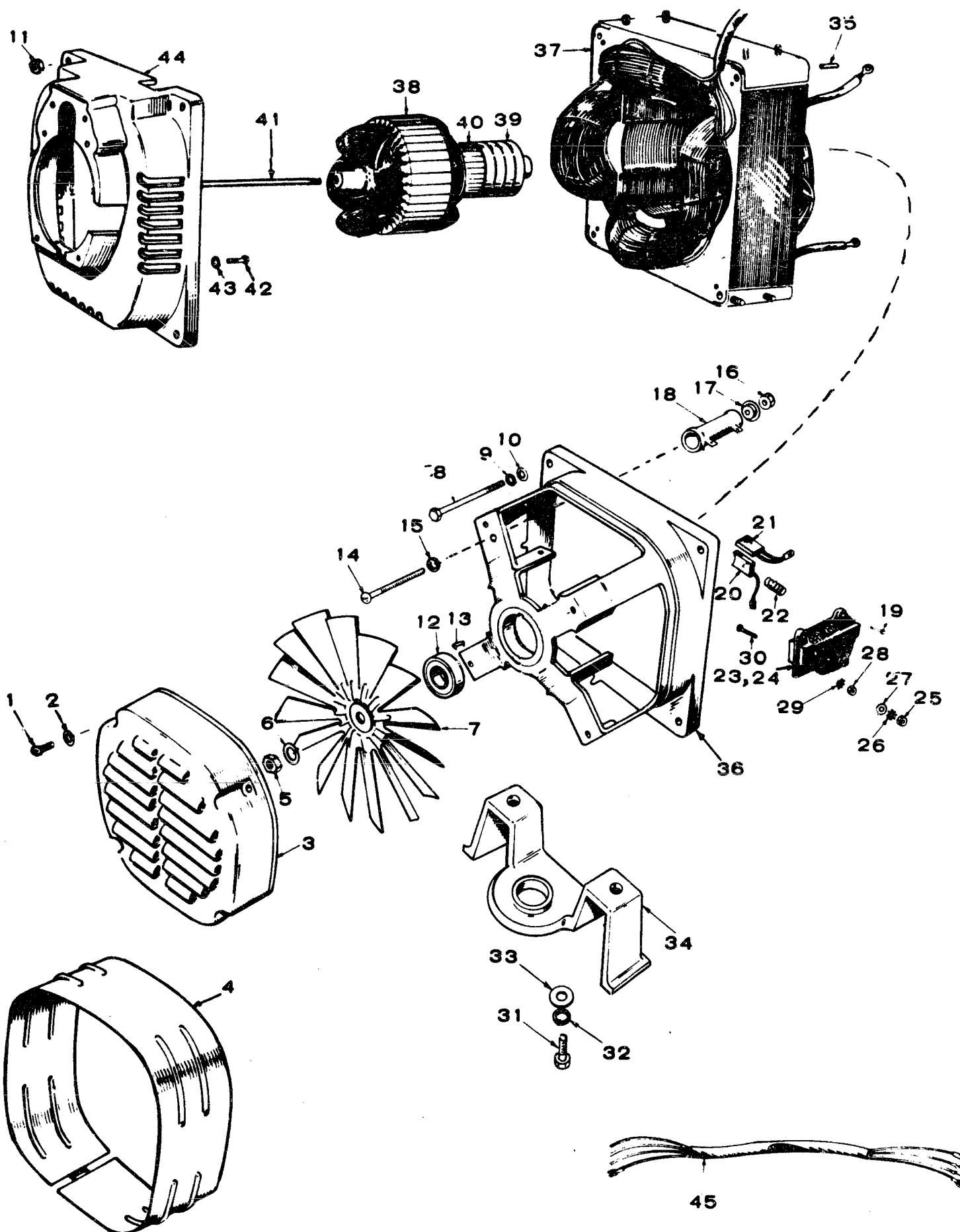
## EXHAUST SYSTEM



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	155-1239	2	Clamp, Muffler (1-5/8" Pipe)
2	155-1234	1	Bracket, Hanger - Muffler
3	155-1235	1	Tube, Exhaust (1-1/2" x 19") - Optional
5	155-1240	1	Tube, Exhaust (1-5/8" x 15") - Optional
6	154-1578	1	Tube, Exhaust - Manifold Extension (1-5/8" x 18")
7	155-1222	1	Muffler, Exhaust - Side Inlet (21-9/16" Lg)
8	155-1254	1	Spark Arrester - Optional
9	155-1258	1	Muffler/Spark Arrester - Side Inlet - Optional
10	800-0026	4	Screw, Cap - Hex Head (5/16-18 x 3/4")
11	850-0045	6	Washer Lock - Spring (5/16)
12	154-1762	1	Manifold, Exhaust - Left Side Down
13	867-0002	2	Nut, Hex (5/16-24) - Use with Optional Heat Shield
14	154-1725	2	Gasket, Exhaust Manifold
15	155-1380	1	Shield, Exhaust Tube -



# GENERATOR



## GENERATOR

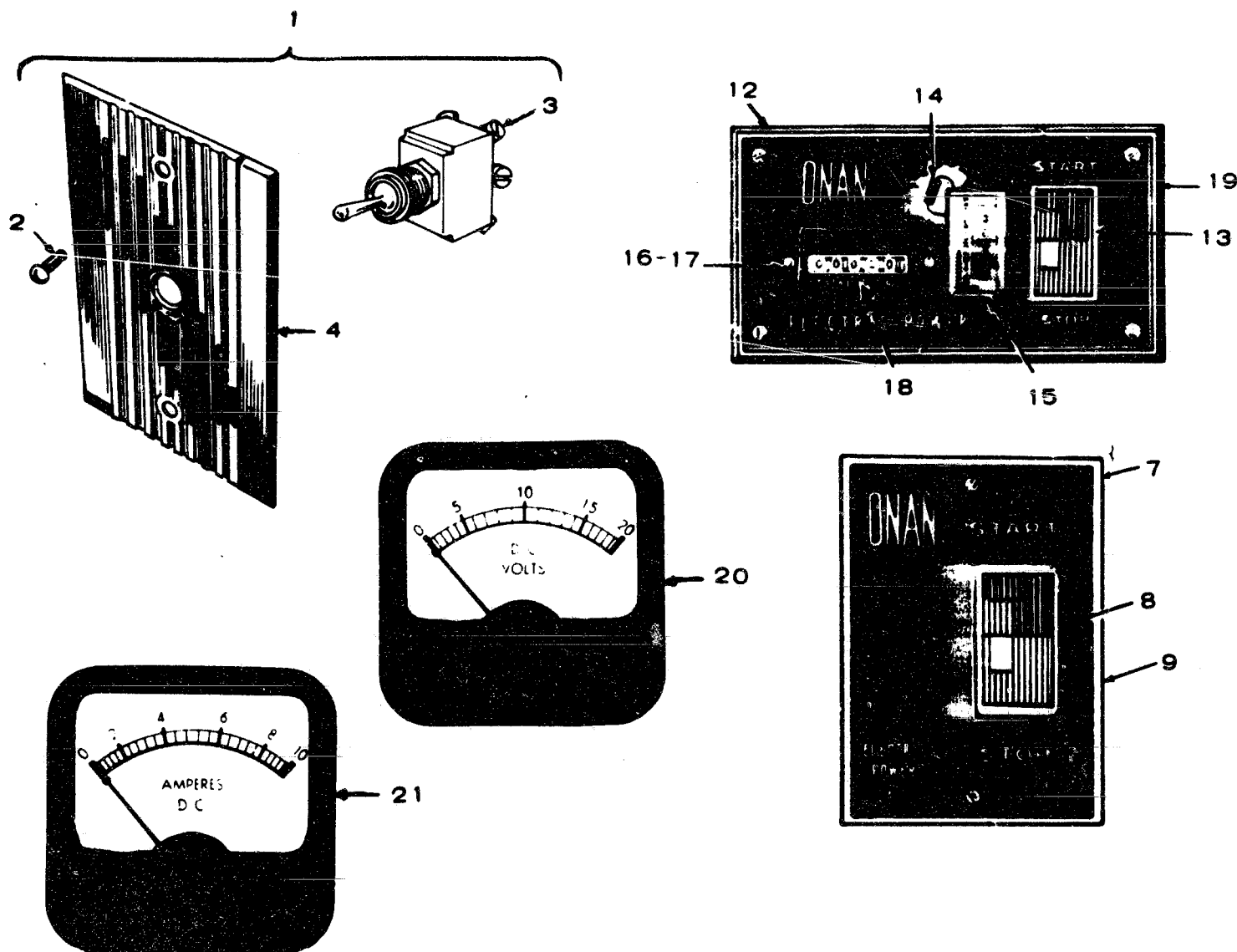
REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	812-0156	2	Screw, Machine - Round Head (1/4-20 x 1-1/2")	25	871-0010	4	+ Nut, Hex - Brass (#10-32)
2	850-0040	2	Washer, Lock - Spring (1/4)	26	853-0008	4	+ Washer, Lock - External Tooth (#10)
3	232-2107	1	Cover, Generator	27	526-0049	4	+ Washer, Flat - Brass (#10)
4	234-0362	1	Wrapper, Generator	28	871-0010	4	+ Nut, Hex - Brass (#10-32)
5	870-0203	1	Nut, Hex (7/16-20)	29	853-0008	4	+ Washer, Lock - External Tooth (#10)
6	850-0055	1	Washer, Lock - Spring (7/16)	30	815-0341	4	+ Screw, Machine - Hex Head, Brass (#10-32 x 1")
7	205-0090	1	Fan, Generator	31	800-0051	2	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
8	800-0043	4	Screw, Cap - Hex Head (5/16-18 x 5")	32	850-0050	2	Washer, Lock - Spring (3/8)
9	850-0045	3	Washer, Lock - Spring (5/16)	33	526-0030	2	Washer, Flat (13/32" I.D. x 7/8" O.D. x 1/8" Thk)
10	526-0115	4	Washer, Flat (11/32" I.D. x 11/16" O.D. x 1/16" Thk)	34	232-2619	1	Support, Generator
11	862-0015	4	Nut, Hex (5/16-18)	35	516-0182	8	Pin, Straight, Headless
12	510-0047	1	Bearing, Ball (Part of Armature Assembly)	36	211-0187	1	End Bell, Generator
13	232-0596	1	Clip, Retaining - Bearing	37	STATOR, GENERATOR		
14	812-0092	1	Screw, Machine - Round Head (#8-32 x 2-3/4")		220-1818	1	50 Hertz Sets
15	850-0025	1	Washer, Lock - Spring (#8)		220-1820	1	60 Hertz Sets
16	860-0008	1	Nut, Hex (#8-32)	38	ARMATURE ASSEMBLY, GENERATOR (Includes Parts Marked *)		
17	304-0014	1	Washer, Centering - Resistor		201-2406	1	50 Hertz Sets
18	353-0057	1	Resistor, Wirewound - 3.4-Ohm, 75 Watt, 0.2%		201-2405	1	60 Hertz Sets
19	815-0359	15	Screw, Tapping - Hex Washer Head (#10-32 x 7/8")	39	204-0110	1	*Collector Ring, Generator
20	214-0095	4	Brush, Commutator	40	203-0153	1	*Commutator, Generator
21	214-0096	8	Brush, Collector Ring	41	520-0732	1	Stud
22	212-1232	12	Spring, Brush	42	800-0050	4	Screw, Cap - Hex Head (3/8-16 x 1-1/4")
23	212-0359	2	Block - Generator Brush - Bottom and Right Side (Includes Parts Marked +)	43	850-0050	4	Washer, Lock - Spring (3/8)
24	212-0360	2	Block - Generator Brush - Top and Left Side (Includes Parts Marked +)	44	231-0164	1	Adapter - Generator to Engine
				45	338-0946	1	Harness, Wiring

\* - Parts included in Armature Assembly  
+ - Parts included in Generator Brush Blocks.

## SERVICE KITS AND MISCELLANEOUS

REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
	168-0123	1	Gasket Kit, Carbon Removal
	168-0124	1	Gasket Kit, Engine
	522-0281	1	Overhaul Kit
	160-1213	1	Kit, Ignition Tune-up (Top Adjusted Point Set)
	525-0305	1	Touch-up Paint (13 oz. Pressurized Can), Green

# **REMOTE STARTING CONTROL - OPTIONAL** **(Used With Three Wire Start Circuits Only)**



REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION	REF. NO.	PART NO.	QTY. USED	PART DESCRIPTION
1	308-0165	1	Control Package - Remote Starting (Includes Parts Marked *)	12	300-0986	1	Control Assembly Remote Starting - Deluxe (Includes Parts Marked £)
2	815-0385	2	*Screw, Machine - Round Head, Black Zinc Finish (#6-32 x 1/2")	13	308-0341	1	£Switch, Push - DPDT (Momentary) With Intergal 12 Volt Lamp)
3	308-0154	1	*Switch, Toggle - SPDT	14	359-0034	1	£Diode
4	308-0168	1	*Plate, Mounting	15	302-0888	1	£Meter, Battery Condition
7	300-0985	1	Control Assembly, Remote Starting - Standard (Includes Parts Marked *)	16	815-0385	2	£Screw, Machine - Round Head, Black Zinc Finish (#6-32 x 1/2")
8	308-0341	1	*Switch, Push - DPDT (Momentary) With Intergal 12 Volt Lamp	17	302-0561	2	£Nut, Hex (#6-32)
9	301-3566	1	*Panel, Control	18	302-0562	1	£Meter, Time Totalizing
				19	301-3606	1	£Panel, Control
				20	302-0562	1	Voltmeter, DC (0-20)
				21	302-0561	1	Ammeter, DC (0-10)

\* - Parts Included in Control Package 308-0165.  
 \* - Parts Included in Control Assembly 300-0985.  
 £ - Parts Included in Control Assembly 300-0986.



**SPECIAL PARTS LIST FOR MODEL** 3.0BF-53CR **SPEC** 16000B  
**FOR STANDARD PARTS REFER TO CATALOG** 965-0220 **KEY NO.** -  
(PARTS CATALOG ALSO CONTAINS COMPONENTS FOR MAJOR OPTIONAL FEATURES LISTED BELOW)  
**WIRING DIAGRAM NO.** (ENG)611-1127-01

PART NO.	QTY.	DESCRIPTION	PART NO.	QTY.	DESCRIPTION
150-0678	1	Clip, Sensitivity Adjustment			
149-1554	1	Line, Fuel - Pump To Carb.			
149-1541	1	Pump, Fuel			
332-0556	1	Connector - Fuel Pump Lead			
502-0196	1	Elbow, Fuel Pump Inlet			
134-3418	1	Guard, Scroll			
336-2379	1	Lead, Low Oil Pressure Switch			
338-1132	1	Harness, Wiring - Generator Set - Includes Diode And Relay			
307-1619	1	Relay, Ignition - Includes Fastener			
870-0341	1	Fastener, Ignition Relay			

SPECIAL PARTS LIST FOR MODEL 4.0BF-3CR SPEC 16000B  
FOR STANDARD PARTS REFER TO CATALOG 965-0220 KEY NO. -  
(PARTS CATALOG ALSO CONTAINS COMPONENTS FOR MAJOR OPTIONAL FEATURES LISTED BELOW)

WIRING DIAGRAM NO. (ENG)611-1127-01

PART NO.	QTY.	DESCRIPTION	PART NO.	QTY.	DESCRIPTION
150-0678	1	Clip, Sensitivity Adjustment			
149-1554	1	Line, Fuel - Pump To Carb.			
149-1541	1	Pump, Fuel			
332-0556	1	Connector - Fuel Pump Lead			
502-0196	1	Elbow, Fuel Pump Inlet			
134-3418	1	Guard, Scroll			
336-2379	1	Lead, Low Oil Pressure Switch			
338-1132	1	Harness, Wiring - Generator Set - Includes Diode And Relay			
307-1619	1	Relay, Ignition - Includes Fastener			
870-0341	1	Fastener, Ignition Relay			

SPECIAL PARTS LIST FOR MODEL 4.OBF-8R SPEC 16000B  
 FOR STANDARD PARTS REFER TO CATALOG 965-0220 KEY NO. -  
 (PARTS CATALOG ALSO CONTAINS COMPONENTS FOR MAJOR OPTIONAL FEATURES LISTED BELOW)  
 WIRING DIAGRAM NO. (ENG)611-1127-04

PART NO.	QTY.	DESCRIPTION	PART NO.	QTY.	DESCRIPTION
150-0678	1	Clip, Sensitivity Adjustment			
149-1554	1	Line, Fuel - Pump To Carb.			
149-1541	1	Pump, Fuel			
332-0556	1	Connector - Fuel Pump Lead			
502-0196	1	Elbow, Fuel Pump Inlet			
134-3418	1	Guard, Scroll			
336-2379	1	Lead, Low Oil Pressure Switch			
201-2413	1	Armature Assembly, Generator			
520-0733	1	Stud, Armature Through			
338-1132	1	Harness, Wiring - Generator Set - Includes Diode And Relay			
307-1619	1	Relay, Ignition - Includes Fastener			
870-0341	1	Fastener, Ignition Relay			

SPECIAL PARTS LIST FOR MODEL 4.0BF-1R SPEC 16002A  
FOR STANDARD PARTS REFER TO CATALOG 965-0220 KEY NO. -  
(PARTS CATALOG ALSO CONTAINS COMPONENTS FOR MAJOR OPTIONAL FEATURES LISTED BELOW)  
WIRING DIAGRAM NO. (ENG)611-1123-01

PART NO.	QTY.	DESCRIPTION	PART NO.	QTY.	DESCRIPTION
150-0678	1	Clip, Sensitivity Adjustment			
134-3418	1	Guard, Scroll			
336-2379	1	Lead, Low Oil Pressure Switch			
Parts Not Furnished By Onan					
Mounting Plate					
Mounting Hardware					



SPECIAL PARTS LIST FOR MODEL 4.0BF-3CR SPEC 16002B  
 FOR STANDARD PARTS REFER TO CATALOG 965-0220 KEY NO. -  
 (PARTS CATALOG ALSO CONTAINS COMPONENTS FOR MAJOR OPTIONAL FEATURES LISTED BELOW)

WIRING DIAGRAM NO. (ENG)611-1127-01

PART NO.	QTY.	DESCRIPTION	PART NO.	QTY.	DESCRIPTION
150-0678	1	Clip, Sensitivity Adjustment			
149-1554	1	Line, Fuel - Pump To Carb.			
149-1541	1	Pump, Fuel			
332-0556	1	Connector - Fuel Pump Lead			
502-0196	1	Elbow, Fuel Pump Inlet			
134-3418	1	Guard, Scroll			
336-2379	1	Lead, Low Oil Pressure Switch			
338-1132	1	Harness, Wiring - Generator Set - Includes Diode And Relay			
307-1619	1	Relay, Ignition - Includes Fastener			
870-0341	1	Fastener, Ignition Relay			
Parts Not Furnished By Onan					
Mounting Plate					
Mounting Hardware					

SPECIAL PARTS LIST FOR MODEL 4.0BE-3CR SPEC 16004B  
 FOR STANDARD PARTS REFER TO CATALOG 965-0220 KEY NO. -  
 (PARTS CATALOG ALSO CONTAINS COMPONENTS FOR MAJOR OPTIONAL FEATURES LISTED BELOW)

WIRING DIAGRAM NO. (ENG)611-1127-01

PART NO.	QTY.	DESCRIPTION	PART NO.	QTY.	DESCRIPTION
150-0678	1	Clip, Sensitivity Adjustment			
149-1554	1	Line, Fuel - Pump To Carb.			
149-1541	1	Pump, Fuel			
332-0556	1	Connector - Fuel Pump Lead			
502-0196	1	Elbow, Fuel Pump Inlet			
134-3418	1	Guard, Scroll			
336-2379	1	Lead, Low Oil Pressure Switch			
154-1866	1	Manifold, Exhaust - Left Side Down			
154-1883	1	Bracket, Exhaust Manifold Heat Shield Mtg - Left			
154-1886	1	Bracket, Exhaust Manifold Heat Shield Mtg - Right			
154-1888	1	Shield, Heat - Exhaust Manifold			
338-1132	1	Harness, Wiring - Generator Set - Includes Diode And Relay			
307-1619	1	Relay, Ignition - Includes Fastener			
870-0341	1	Fastener, Ignition Relay			

SPECIAL PARTS LIST FOR MODEL 4.0BF-3CR SPEC 16856B  
 FOR STANDARD PARTS REFER TO CATALOG 965-0220 KEY NO. -  
 (PARTS CATALOG ALSO CONTAINS COMPONENTS FOR MAJOR OPTIONAL FEATURES LISTED BELOW)  
 WIRING DIAGRAM NO. (ENG)611-1131-01

PART NO.	QTY.	DESCRIPTION	PART NO.	QTY.	DESCRIPTION
150-0678	1	Clip, Sensitivity Adjustment			
134-3416	1	Guard, Scroll			
336-2379	1	Lead, Low Oil Pressure Switch			
154-1837	1	Tube, Exhaust - Right Hand			
154-1838	1	Tube, Exhaust - Left Hand			
140-1344	1	Base, Air Cleaner			
123-1442	1	Tube, Breather (To Crankcase)			
123-1440	1	Connector, Breather Tubes (1" Long)			
503-0769	2	Clamp, Hose - Breather Tube Connector			
123-1441	1	Tube, Breather (To Air Cleaner)			
140-1216	1	Cartridge, Air Cleaner			
140-1295	1	Cover, Air Cleaner			
865-0020	1	Nut, Wing - Air Cleaner			
503-0189	1	Clamp, Hose - Breather Tube To Crankcase			
155-0484	2	Muffler			
502-0065	1	Elbow, Fuel Pump Outlet			
149-1417	1	Line, Fuel - Pump To Carb.			
149-1304	1	Pump, Fuel - No Longer Available - For Complete Pump Replacement Order 149-1553 Fuel Pump Kit (Kit Includes Necessary Elbows)			
301-4129	1	Cover, Control Box			
332-0050	1	Clip, Cable - Control Mounting Bracket			
301-4131	1	Box, Control			
332-0604	1	Block, Terminal - 5 Place			
508-0071	1	Grommet, Rubber - Control Box (7/8" hole)			
508-0109	1	Grommet, Rubber - Control Box (1" hole)			
308-0345	1	Switch, Toggle - SPDT			
338-1026	1	Harness, Wiring - Control Box			
307-1619	1	Relay, Ignition - Includes Fastener			
321-0084	1	Holder, Fuse			
321-0146	1	Fuse - 10 Amp			

SPECIAL PARTS LIST FOR MODEL 4.08F-8R SPEC 17389B  
 FOR STANDARD PARTS REFER TO CATALOG 965-0220 KEY NO. -  
 (PARTS CATALOG ALSO CONTAINS COMPONENTS FOR MAJOR OPTIONAL FEATURES LISTED BELOW)

WIRING DIAGRAM NO. (ENG)611-1127-04

PART NO.	QTY.	DESCRIPTION	PART NO.	QTY.	DESCRIPTION
150-0678	1	Clip, Sensitivity Adjustment			
149-1554	1	Line, Fuel - Pump To Carb.			
149-1541	1	Pump, Fuel			
332-0556	1	Connector - Fuel Pump Lead			
502-0196	1	Elbow, Fuel Pump Inlet			
134-3418	1	Guard, Scroll			
336-2379	1	Lead, Low Oil Pressure Switch			
201-2526	1	Armature Assembly, Generator (Also Includes Fan Hub)			
232-2586	1	Hub, Generator Fan			
520-0781	1	Stud, Armature Through			
211-0264	1	End Bell, Generator			
205-0116	1	Fan, Generator			
232-2587	1	Cover, Generator Fan			
234-0530	1	Screen, Generator Fan			
338-0947	1	Harness, Wiring - Generator To Control			
338-1132	1	Harness, Wiring - Generator Set - Includes Diode And Relay			
307-1619	1	Relay, Ignition - Includes Fastener			
870-0341	1	Fastener, Ignition Relay			

**SPECIAL PARTS LIST FOR MODEL** 4.0 BF-8R **SPEC** 20793B  
**FOR STANDARD PARTS REFER TO CATALOG** 965-0220 **KEY NO.**         
(PARTS CATALOG ALSO CONTAINS COMPONENTS FOR MAJOR OPTIONAL FEATURES LISTED BELOW)  
**WIRING DIAGRAM NO.** (ENG) 611-1127-04

PART NO.	QTY.	DESCRIPTION	PART NO.	QTY.	DESCRIPTION
201-2527	1	Armature Assembly, Wound Extended Shaft (Includes Parts Marked *)			
510-0047	1	*Bearing, Ball			
204-0110	1	*Collector Ring, Generator			
203-0153	1	*Commutator, Generator			
338-0947	1	Harness, Wiring-Generator			
520-0733	1	Stud, Armature Thru			
516-0196	4	Pin, Dowel-End Bell			
211-0365	1	Bell, End (Includes Dowel Pins)			
212-0361	1	Block, Generator Brush-Top			
212-0345	1	Block, Generator Brush-Right Side			
212-0352	1	Block, Generator Brush-Bottom			
212-0353	1	Block, Generator Brush-Left Side			
		(Note: Above 4 Brush Block Assemblies Include Parts Marked +)			
214-0096	2	+Brush, AC			
214-0095	1	+Brush, DC			
212-1232	3	+Spring, Gen. Brush			
205-0116	1	Fan, Generator			
232-2827	1	Cover, Generator Fan			